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R CH1762

EXAMINER

ANTHONY, J

ART UNIT

PAPER NUMBER

223

2

DATE MAILED:

01/15/91

JAMES E. SHIPLEY
PATENT DIVISION
LEGAL DEPARTMENT
E. I. DU PONT DE NEMOURS & CO.
WILMINGTON, DE 19898

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), — days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- ☒ Notice of References Cited by Examiner, PTO-892.
- ☐ Notice re Patent Drawing, PTO-948.
- ☐ Notice of Art Cited by Applicant, PTO-1449.
- ☐ Notice of Informal Patent Application, Form PTO-152.
- ☐ Information on How to Effect Drawing Changes, PTO-1474.
- ☐ _____

Part II SUMMARY OF ACTION

- ☒ Claims 1-12 are pending in the application.

Of the above, claims 1-6 are withdrawn from consideration.

- ☐ Claims _____ have been cancelled.
- ☐ Claims _____ are allowed.
- ☒ Claims 7-12 are rejected.
- ☐ Claims _____ are objected to.
- ☐ Claims _____ are subject to restriction or election requirement.
- ☐ This application has been filed with Informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
- ☐ Formal drawings are required in response to this Office action.
- ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable. ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
- ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
- ☐ The proposed drawing correction, filed on _____, has been ☐ approved. ☐ disapproved (see explanation).
- ☐ Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.
- ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
- ☐ Other

EXAMINER'S ACTION

DETAILED ACTION

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-6 are, drawn to a process of using a fire extinguishing composition, classified in Class 169, subclass 46.

II. Claims 7-12 are, drawn to a fire extinguishing composition, classified in Class 252, subclass 3.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP 806.05(h)). In the instant case the product as claimed can be used in a materially different process such as industrial cleaning or refrigeration.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification restriction for examination purposes as indicated is proper.

During a telephone conversation with Herbert M. Wolfson on 2/9/90 a provisional election was made with traverse to prosecute the invention of group II, claims 7-12. Affirmation of this election must be made by applicant in responding to this Office action. Claims 1-6 are withdrawn from further consideration by the Examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

2. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

3. Claims 7-12 are rejected under 35 U.S.C. 103 as being unpatentable over Paolo et al. U.S. Patent Number 3,479,286.

Paolo teaches a fire extinguishing composition consisting essentially of: 1) a completely halogenated alkane, 2) a fluorohydrocarbon having at least one hydrogen atom per molecule, i.e. 1,1,2,2,-tetrafluoroethane, and optionally 3) a propellant such as carbon dioxide. The molar ratio of the fluorohydrocarbon to the completely halogenated alkane, ranges between substantially 0.2 to 5. Paolo's composition "differs" from applicant's composition in that applicant does not require the addition of the completely halogenated alkane. In addition, Paolo is silent about applicant's pressure requirement of 140 psig.

It would have been obvious to one having ordinary skill in the art to make a composition that is a subset of Paolo's composition. Applicant's composition is encompassed by Paolo's components 2) and 3). In addition, the use of the word, "comprising", in applicant's claims, opens them up to any additionally component, such as Paolo's completely halogenated alkanes. Applicant's pressure level is given little patentable weight because it does not add any additional component to the composition. The pressure requirement importance

relates to the process of using the composition and not to any material change in the composition itself.

4. Claims 7-9, and 11 are rejected under 35 U.S.C. 103 as being unpatentable over Uchida et al. U.S. Patent Number 4,459,213 alone or Green U.S. Patent Number 4,954,271 alone.

Uchida teaches fire extinguishing compositions comprising: 1) protein or protein decomposition products, 2) polyhydroxy compounds, and 3) halogenated hydrocarbons (35 to 90%), such as pentafluoroethane, tetrafluoroethane, chlorotetrafluoroethane, and halogenated propanes or propylenes. Particularly preferred halogenated hydrocarbons are those having 1 to 4 carbon atoms and a boiling point of -50 C to 150 C (column 2 line 41 to column 3 line 8). These compositions may be added to water to form an emulsion. Uchida's composition "differs" from applicant's composition in that applicant does not require the addition of Uchida's components 1) and 2).

Green teaches non-toxic fire extinguishing compositions consisting essentially of: 1) a higher boiling fluorocarbon, such as 1,1-dichloro-2,2,2-trifluoroethane (50 to 98%), 2) a lower boiling fluorocarbon such as pentafluoroethane, 1,2,2,2-tetrafluoroethane and 1-chloro-1,2,2,2-tetrafluoroethane (0 to 48%) and 3) a detoxifying agent (2 to 10%). Green's composition "differs" from applicant's composition in that the applicant composition does not require Green's component 3).

Applicant's composition is deemed to be obvious over the compositions taught and suggested by either Uchida or Green. One of ordinary skill in the art could easily make a composition that is a subset of the compositions taught by the above two references. This is especially true over the Green Patent. Green teaches that his fluorocarbons are non-toxic by themselves. Only at elevated temperatures do they decomposed to give mineral acids. The detoxifying agent is added to counteract these mineral acids, not to improve the fire extinguishing ability of the composition. In addition,

the use of the word, "comprising", in applicant's claims, opens them up to any additionally component.

5. Claims 10 and 12 are rejected under 35 U.S.C. 103 as being unpatentable over Uchida et al. U.S. Patent Number 4,459,213 or Green U.S. Patent Number 4,954,271 both patents in view of either Rainaldi et al U.S. Patent Number 3,656,553 or Kung U.S. Patent Number 4,226,728.

Uchida and Green have been described above. They differ from applicant's invention for the same reasons given in section 4 of this office action. In addition, these references do not directly teach the use of a propellant with their composition.

Rainaldi and Kung teach the well known use of a propellant with halogenated hydrocarbon type fire extinguishing agents.

This rejection builds on the rejection made in section 4 of this office action. It would have been obvious to one having ordinary skill in the art to add a propellant to the compositions of Uchida and Green using the teachings of Rainaldi and Kung as motivation. In addition, such a combination is very well known in the art. The use of applicant's particular pressure range, is deemed to be within the skill of the ordinary artisan. It is normally not inventive to discover optimum or workable ranges by routine experimentation, In re Aller 105 USPQ 223 1955.

6. Claims 8-12 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 8 line 29, the phrase "said enclosed area", has no antecedent basis. Also the phrase "said ethane", would be better worded as, "said fluoro-substituted ethane". This also applies for claim 11. In claim 9, the first listed compound "CF₂-CF₂H" is incorrect. Does applicant intend pentafluoroethane? Claims 10-12 are being rejected for being dependent on a rejected claim.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Joseph D. Anthony whose telephone number is (703) 308-1934. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0766.

J.D.A.

1/4/91


ROBERT L. STOLL
SUPERVISORY PRIMARY EXAMINER
ART UNIT 223